III. *An Account of the ſtrange effects of the* Indian *Varniſh. Wrote by Dr* Joſeph del Papa, *Phyſician to the Cardinal* de Medices, *at the deſire of the Great Duke of* Tuſcany. *Communicated by Dr* William Sherard.

THe uſing and handling of the *Indian* Varniſh (or Lackar) ſo far as is neceſſary to apply or lay it on ſubjects to be varniſht, having produced ſuch extraordinary effects on Signior *Ignatio*, and more remarkably on his Maid Servant, *viz.* in great ſwellings of their Heads and Eyes, and in their Arms, and indeed almoſt their whole Body, with an intolerable itching and inflamation, or heat and pimples, is ſo new and extraordinary a Phænomenon in Nature, as exacts the wonder, and preſſes the curious to ſearch the reaſon; and the rather, for that amongſt the numerous Ingredients of the *Materia Medica*, and all other natural ſubſtances known to us, there is not one that produces equal or the like alteration to what this does in humane bodies. All our Liquors and corroſive Spirits hurt only the parts of the Body that they immediately touch, and diffuſe not their miſchievous quality over the whole Body, as this Varniſh does, and the hurt cauſed by them is very different. Poyſonous fumes or ſteams from Mercury or Antimony manifeſt their malignity on the Brain and Nerves with great and incurable evils: whereas the Effluvium and touch of this Varniſh offends only the external skin of the whole body, indeed after a very ſtrange manner, but yet not deſtructive to the part affected, which grows well again of itſelf. There are indeed ſome juices of Roots and Herbs, and other parts of Vegetables, which touching our fleſh, ſome inflame it, ſome exulce-

ulcerate it, ſome produce ſwellings, puſtules and itching; but all theſe produce the evil only where they touch, and ſpread not their inviſible venom over other parts of the Body. In fine, I know not the example of one thing, which either only toucht with the hand, or inſinuating itſelf by its fume or vapour into our body, is able to produce over almoſt all the skin of the body, inflamations, ſwellings, itching and Puſtules, as if the whole body were ſtung with an infinite number of Waſps or Gadbees, for ſuch exactly are the effects cauſed by this Varniſh.

This great difference between this and all things elſe that we know, and the Ingredients of which it is made, being abſolutely unknown, renders it impoſſible to penetrate the cauſe of the above-named effects. Yet whoever would give ſome ſatisfaction to the mind, by propoſing ſome probable thought, may ſay that this Varniſh contains ſome matter, which when hot ſends into our Body a very ſubtile thin Vapour, which affects only the skin, leaving the other parts of the body untoucht; after the ſame manner, Cantharides, not only taken inwardly, but alſo outwardly applied to our Bodies, communicates a venemous quality of a particular nature, affecting only the Kidneys, Bladder and Urinary paſſages, cauſing there ſenſible pains and excoriations, not in the leaſt touching the other *Viſcera*. Some Phyſicians of Repute are of opinion, that this particular diſagreement of Cantharides with the Urinary Ducts, comes from the Salt and Nitre contained in the Urine, which gives life and vigour to the Poyſon of the Cantharides, without which Salt the Poyſonons quality of the Cantharides could have no power. So after the ſame manner it may be ſaid that the noxious fumes of the Varniſh becomes hurtful to the Skin, becauſe it mixes there with ſome juice it meets with in the Skin itſelf, eſpecially in the miliary glands, whereof the whole Skin is full. This thought is but an imagination, without any certain baſis, but in matters of this difficulty we may well bring

bring only probable and likely arguments. This is certain that this Varniſh exerts all its malignity againſt the Skin, the *Viſcera* and Blood being untouch't; beſides, I obſerved that the Maid (at the ſame time as her whole Skin almoſt was hard, inflamed, ſwell'd, and full of puſtules) had yet no Fever, no pain in the Head, nor any inward ſickneſs or illneſs; and as to what diſorders ſhe or Signior *Ignatio* felt in their Eyes, this likewiſe was only a ſwelling affecting the Eye-lids only, which may be reckon'd but as Skins: but 'tis poſſible the ill effects of the Varniſh was more ſenſible and troubleſome in that part, becauſe the Skin there is thinner and more delicate than on the reſt of the Body. This Varniſh therefore is only an enemy to the Skin; and that this miſchief ſhould attend it, it is not neceſſary that the Varniſh ſhould be heated; for altho it is cold, it ſends forth this ill ſteam, which inſinuates itſelf into the Body, eſpecially when touched and handled.

I have ſeveral times ſpread a great deal of this Varniſh hot upon the naked skin of Poultry, and they never received any miſchief from it, either internal or external. I have cauſed other Fowl to ſwallow crumbs of Bread ſopt in the Varniſh, and they ſeemed to like it very well. In others I have made ſeveral little pricks in their breaſts till the Blood came out, and then anointed it all over with Varniſh, which, inſtead of hurting them, proved a Balſam to heal them. It is poſſible this Varniſh on the very thin skin of Fowl does not produce the ſame effects as on that of Men, becauſe they are very different from one another, in their ſtructures and quality of the humours contained in them. And to ſay ſomething of its ſubſtance; I have obſerved that this Varniſh is in a great part compoſed of a Gummy and unctuous matter, and ſince it is very light, ſwimming upon Brandy and Oyl, and unites neither with Water nor Spirit of Wine, nor any other Liquor but only with Oyl; and burns or takes fire, for I have dipt Cotton in it, which has burnt all away to aſhes, tho

tho at firſt there was ſome difficulty to make it take fire; pre-chance ſome other matter not unctuous being mixt with it. And laſtly, Since, being obſerved with the Microſcope, its compoſition ſhews like that of Oyl or Lard, or the like unctuous matter, it is very likely from all theſe, that it is compoſed of the Gum or juice of ſome Reſinous Herb or Tree, or of the fat of ſome Animal, or Hogs Lard. And to make ſome gueſs; who knows but the Gall of ſome creature may be mixt with it, to make it the more eaſily receive a ſmoothneſs and luſtre, as Limners uſe to put Gall into their Water-colours, to make them run and ſpread the better; and that the miſchief we find in touching and uſing it may proceed from hence.

I verily believe, there is no Mercury, of what ſort ſoever, in this Varniſh; not only becauſe it is very light (as was ſaid) but beſides, becauſe I have been very diligent in trying whether Gold would diſcover any ſign of Mercury, either in the body of it, or the ſmoke, but could never find any; and moreover, Mercury produces very different effects in our Bodies, from thoſe before related of this Varniſh.

Beſides, I have obſerved that the Varniſh, mixt with Spirit of Vitriol, or Juice of Limons or Vinegar, or Spirit of Wine, makes no ebullition nor change of colour; but it readily changes colour, when taken out of the Veſſel, it is expoſed to the air, becoming at firſt reddiſh, and afterwards almoſt quite black; the outward skin of it, which is next to the air, becoming very hard and black: This Skin is very thin, under which the reſt of the Varniſh remains ſoft and fluid, of the colour and conſiſtence of Honey; and as often as you take off this outward black hard skin, there will another be formed immediately like the former, and this as often as you pleaſe to repeat the experiment. So that the whole ſubſtance of the Varniſh will in time be changed into theſe hard and black skins.

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Finally, 'Tis worth obſerving, that this Varniſh has this known power; for having ſpread ſome of it on the naked Breaſt of ſome Fowls, leaving it ſticking there for three days, I afterwards found between the dryed Varniſh and the Fleſh the place all feſtered, and full of a yellowiſh Serum and Matter, but without any farther miſchief to the Body of the Fowls themſelves. I have attempted the ſame thing in Dogs and Cats, but without ſucceſs, for theſe Animals with their tongues and claws ſoon take off all the Varniſh from their Bodies, and ſo have no hurt by it. Poſſibly in Horſes and like Beaſts the Experiment may ſucceed better, if the Varniſh has this corroſive or Cauſtic quality upon their Bodies as it has on Poultry.

IV. *Obſervations upon the Diſſolutions and Fermentations which we may call Cold, becauſe they are accompanied with a Coolneſs of the Liquors into which they paſs. And of a new Thermometer. Extracted out of a Diſcourſe, which* Mr Geoffroy, *F. R. S. made in the Public meeting of the Royal Academy of Sciences, the 21ſt of* April, 1700.

THe different Searches which I have made about the Nature and Propriety of Salts (in order to acquit my ſelf of the Promiſe I had made of taking ſome pains in this matter, when I had the Honour to be admitted into this Society) and the different Experiments which I have tryed, in examining their Diſſolutions or Mixtures in certain Liquors, have given me occaſion to obſerve, that the Mixture of the greateſt part of the Salts in many Liquors is accompanied with a ſenſible Coldneſs of the Li-